

## JOINT MAJOR IN MOLECULAR BIOLOGY & BIOCHEMISTRY AND COMPUTING SCIENCE FALL 2022 GRADUATION PLANNER

Name: \_\_\_\_\_ Student ID: \_\_\_\_\_ Date: \_\_\_\_\_

### PROGRAM REQUIREMENT OVERVIEW

A minimum of 128 units are required to complete the Bachelor of Science (BSc) for the joint major in Molecular Biology and Biochemistry and Computing Science Program. This consists of:

- |   |   |   |   |                   |   |                           |
|---|---|---|---|-------------------|---|---------------------------|
| Lower Division (68 - 72 units) <ul style="list-style-type: none"> <li>• CMPT/MACM/MATH/ STAT(33 - 34 units)</li> <li>• BISC/CHEM/MBB/ PHYS (35 - 38 units)</li> </ul> | + | Upper division (45 Units) <ul style="list-style-type: none"> <li>• CMPT/MACM/MBB/ STAT (43 - 44 units)</li> <li>• Elective courses (1 - 2 units)</li> </ul> | + | WQB (12-15 units) | = | Minimum 125 Units Overall |
|---|---|---|---|-------------------|---|---------------------------|

### LOWER DIVISION REQUIREMENTS (100/200) - 68 - 72 units – Complete all of:

COMPUTING SCIENCE & SCIENCE				
<input type="checkbox"/> BISC 101	<input type="checkbox"/> CHEM 281	<input type="checkbox"/> CMPT 276	<input type="checkbox"/> MATH 152	<input type="checkbox"/> MBB 231
<input type="checkbox"/> BISC 102	<input type="checkbox"/> CHEM 282 OR 283	<input type="checkbox"/> CMPT 295	<input type="checkbox"/> MATH 232 OR 240	<input type="checkbox"/> MBB 222
<input type="checkbox"/> BISC 202	<input type="checkbox"/> CMPT 120 or CMPT 130*	<input type="checkbox"/> MACM 101	<input type="checkbox"/> STAT 270 or STAT 271**	
<input type="checkbox"/> CHEM 121	<input type="checkbox"/> CMPT 125 or CMPT 135*	<input type="checkbox"/> MACM 201 or CMPT 210**	<input type="checkbox"/> PHYS 101 or 120 or 125 or 140	
<input type="checkbox"/> CHEM 122	<input type="checkbox"/> CMPT 225	<input type="checkbox"/> MATH 150 OR 151	<input type="checkbox"/> PHYS 102 or 121 or 126 or 141	

\* Students should complete the set of CMPT 120 + 125 or the set of CMPT 130 +135  
 \*\*Either (CMPT 210 and STAT 271) as a set or (MACM 201 and STAT 270) as a set.

### UPPER DIVISION REQUIREMENTS (300/400) – 45 units:

ALL (27 units)	AT LEAST THREE (9 units)	AT LEAST TWO (6 units)				
<input type="checkbox"/> CMPT 307	<input type="checkbox"/> CMPT 413	<input type="checkbox"/> CMPT 305	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr style="background-color: #800000; color: white;"> <th>UPPER DIVISION ELECTIVE (1-2 units)</th> </tr> <tr> <td><input type="checkbox"/> ANY 3XX/4XX</td> </tr> <tr> <td>_____</td> </tr> </table>	UPPER DIVISION ELECTIVE (1-2 units)	<input type="checkbox"/> ANY 3XX/4XX	_____
UPPER DIVISION ELECTIVE (1-2 units)						
<input type="checkbox"/> ANY 3XX/4XX						
_____						
<input type="checkbox"/> CMPT 354	<input type="checkbox"/> CMPT 419	<input type="checkbox"/> CMPT 310				
<input type="checkbox"/> CMPT 405	<input type="checkbox"/> CMPT 454	<input type="checkbox"/> CMPT 340				
<input type="checkbox"/> CMPT 441	<input type="checkbox"/> MBB 438	<input type="checkbox"/> CMPT 361				
<input type="checkbox"/> MBB 308	<input type="checkbox"/> MBB 441	<input type="checkbox"/> MACM 316				
<input type="checkbox"/> MBB 331	<input type="checkbox"/> MBB 460	<input type="checkbox"/> MBB 321				
<input type="checkbox"/> MBB 342	<input type="checkbox"/> MBB 461					
<input type="checkbox"/> STAT 302	<input type="checkbox"/> MBB 462					
<input type="checkbox"/> CMPT 376W or MBB 309W	<input type="checkbox"/> MBB 463					
	<input type="checkbox"/> MBB 464					

### WQB REQUIREMENTS:

REQUIRED BREADTH
<input type="checkbox"/> B-SOC _____
<input type="checkbox"/> B-SOC _____
<input type="checkbox"/> B-HUM _____
<input type="checkbox"/> B-HUM _____
REQUIRED WRITING
<input type="checkbox"/> CMPT 105W OR ANY LOWER DIVISION W-COURSE

### OPTIONAL REQUIREMENTS:

COMPUTING SCIENCE AND/OR MOLECULAR BIOLOGY & BIOCHEMISTRY CO-OP EDUCATION				
<input type="checkbox"/> CMPT 426 OR MBB 151	<input type="checkbox"/> CMPT 427 OR MBB 251	<input type="checkbox"/> CMPT 428 OR MBB 351	<input type="checkbox"/> CMPT 429 OR MBB 451	<input type="checkbox"/> CMPT 430 OR MBB 452

### SUMMARY OF REQUIREMENTS:

Requirement	Complete	In Progress	Total	Remaining
<b>Total Units (Minimum 125)</b>				
<b>Upper Division Units (45)</b>				

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### ACADEMIC REQUIREMENTS

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#### LOWER DIVISION REQUIREMENTS (or equivalents):

- WQB requirements: Students are required to complete 6 units of writing (W), 6 units of Breadth Science (B-Sci), 6 units of Breadth Social Science (B-Soc), 6 units of Breadth Humanities (B-Hum) and 6 units of Undesignated Breadth (UB).
- Students in the Molecular Biology and Biochemistry and Computing Science joint major automatically fill most of the WQB requirements with the exception of the lower division W course, 6 units of Breadth Social Science and 6 units of Breadth Humanities.
- Students should complete the set of CMPT 120 + CMPT 125 or the set of CMPT 130 + CMPT 135
- Students are to advise taking either (CMPT 210 and STAT 271) as a set or (MACM 201 and STAT 270) as a set.

#### UPPER DIVISION REQUIREMENTS:

- Students must complete at least 45 upper division credits, which include:
  - All of the following: CMPT 307, CMPT 354, CMPT 405, CMPT 441, MBB 308, MBB 331, MBB 342 and STAT 302
  - Two of the following: CMPT 305, CMPT 310, CMPT 340, CMPT 361, MACM 316 or MBB 321
  - Three of the following: CMPT 413, CMPT 419, CMPT 454, MBB 438, MBB 441, MBB 460, MBB 461, MBB 462, MBB 463, MBB 464
  - Writing requirement: CMPT 376W or MBB 309W are required to satisfy UD W requirements. Note: CMPT 376W requires CMPT 105W as a prerequisite.

#### ELECTIVE COURSES

Students will have room to take additional elective credits in order to complete the credits required for graduation.

#### FACULTY OF APPLIED SCIENCE RESIDENCY REQUIREMENTS

At least two thirds of the total Upper Division (UD) units in the program must have been completed at Simon Fraser University. Please refer to current SFU calendar for details.

#### WQB REQUIREMENTS

Students need to complete:

- One Lower Division (LD) Writing Course (CMPT 105W or other lower W course if planning on completing MBB 309W)
- One Upper Division (UD) Writing Course (CMPT 376W or MBB 309W)
- 6 units of Breadth Science (B-Sci): Fulfilled by MACM 101 and BISC 101
- 6 units of Breadth Social (B-Soc)
- 6 units of Breadth Humanities (B-Hum)
- 6 units of Undesignated Breadth (UB) (Math 150/151 and Math 152)

Please refer to: [http://www.sfu.ca/uqcr/for\\_students/wqb\\_requirements/breadth.html](http://www.sfu.ca/uqcr/for_students/wqb_requirements/breadth.html) for courses that fulfill these requirements.

#### PREREQUISITE GRADE REQUIREMENT

Computer science course entry requires a grade of C- or better in each prerequisite course. A minimum 2.40 CGPA is required for 200, 300, and 400 division computing courses.

#### CO-OPERATIVE EDUCATION

Combines work experience with academic studies—all students are encouraged to apply. Co-op does not count towards academic credits. Co-op is not mandatory; however, three work terms must be successfully completed in order to obtain an undergraduate degree with a co-op designation. For more information about Co-op, please see: <http://www.sfu.ca/coop/programs/cmpt/prospective.html>.

#### ADVISING

**Academic advising** is available for students in the Faculty of Applied Sciences. Please see the FAS advising page (<https://www.sfu.ca/fas/current-student/advising.html>) to book an appointment and view drop-in times. **Please bring a copy of your advising transcript with you to the advising session.** Alternatively, you can email your questions to [asadvise@sfu.ca](mailto:asadvise@sfu.ca).